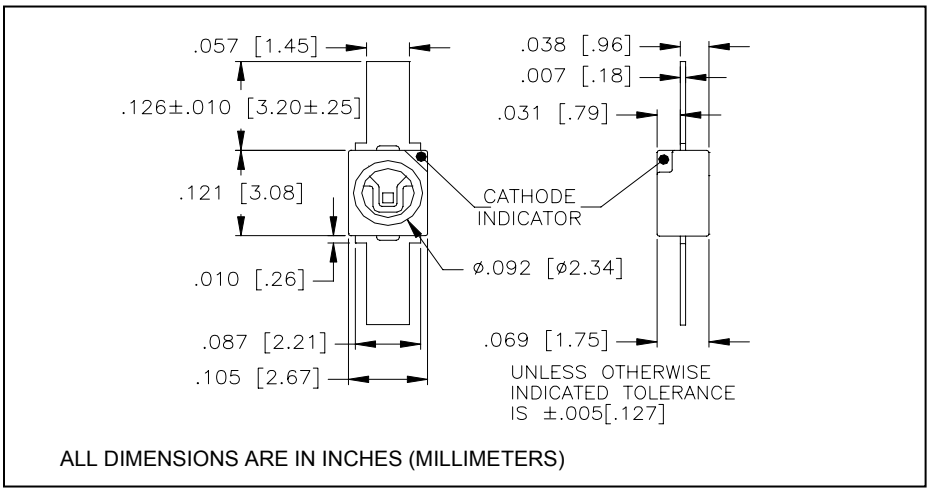
CLE300F

Aluminum Gallium Arsenide IRED
Flat Lead PLCC Package

Clairex® Technologies, Inc.

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features

- Flat lead PLCC package
- ±50° emission angle
- 850 nm peak wavelength
- RoHS compliant

description

The CLE300F is an 850nm high output infrared emitting diode chip featuring current AlGaAs technology. It is mounted in a compact, embedded leadframe package with flying lead configuration and overcoated with clear epoxy to provide a wide emission pattern. Contact Clairex for alternative wavelength emitter chips, different lenses and lead configurations.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature	-40°C to +125°C
operating temperature	-40°C to +125°C
lead soldering temperature[1]	260°C
continuous forward current[2]	50mA
peak forward current (1.0ms pulse width, 10% duty cycle)	1A
reverse voltage	5V
continuous power dissipation[3]	80mW

notes:

1. 0.06" (1.5mm) from case for 5 seconds maximum.
2. Derate linearly 0.40mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 0.64mW/°C from 25°C free air temperature to T_A = +125°C.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output	3.0	4.0	-	mW	I_F = 20mA
V_F	Forward voltage	-	1.4	1.6	V	I_F = 20mA
I_R	Reverse current	-	-	10	µA	V_R = 5V
λp	Peak emission wavelength	-	850	-	nm	I_F = 20mA
BW	Spectral bandwidth at half power points	-	60	-	nm	I_F = 20mA
θ_{HP}	Emission angle at half power points	-	100	-	deg.	I_F = 20mA
t_r	Radiation rise time[4]	-	11	-	ns	$I_{F(PK)}$ = 20mA
t_f	Radiation fall time[4]	-	7.0	-	ns	$I_{F(PK)}$ = 20mA

notes: 4. f = 100kHz, D.C. = 50%. Pulse generator t_r and t_f <200ps.

Clairex reserves the right to make changes at any time to improve design and to provide the best possible

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